

REMARKS/ARGUMENTS

Entry of this amendment and reconsideration of the present application, as amended, are respectfully requested.

Claims 1-3, 5-24, 26-37, 39-44, 46, 47, 49-54 and new claims 55-58 are pending in this application. Claims 4, 25, 38, 45 and 48 are cancelled. Claims 1, 3, 9, 15, 20-22, 26, 35-37, 39, 41, 43, 44, 46, 47, 49 and 50 are amended herein. Unless an argument is made below relating to a particular change to one of the claims to overcome a prior art rejection, the changes to the claims do not relate to patentability.

Information Disclosure Statement

It is respectfully submitted that the foreign patent documents listed in the Information Disclosure Statement filed January 30, 2002 are cited in one or more of the parent applications identified in the Information Disclosure Statement and from which priority is claimed under 35 U.S.C. §120. Therefore, a copy of these references does not have to be submitted pursuant to 37 C.F.R. §1.98(d) cited in MPEP §609, III, A(2), page 600-121. Nevertheless, for the Examiner's convenience, a copy of each of these references is submitted herewith. No fee should be due for consideration of these references by the Examiner in view of 37 C.F.R. §1.98(d) and as such, no authorization is given to charge the applicant's Deposit Account any fee associated with the submission of these references herewith.

Claim Rejections-35 U.S.C. §102

Claims 1-3, 5-24 and 26-53 were rejected under 35 U.S.C. §102(b) as being anticipated by Bauer (U.S. Pat. No. 5,670,853).

The Examiner's rejection is respectfully traversed on the grounds that Bauer does not disclose all of the features set forth in independent claims 1, 15, 26, 37 and 44.

With respect to claims 1 and 15, claim 1 is directed to an arrangement for controlling a deployable component in a vehicle including measurement means for measuring at least one morphological characteristic of an occupant and determination means for obtaining a current position of at least a part of a seat on which the occupant is situated. Control means control the component based on the measured morphological characteristic(s) of the occupant and the current position of the seat. Among other things, the control means are arranged to suppress deployment of the component based on the measured morphological characteristic(s) of the occupant and the current position of the seat. Claim 15 is directed to a related method wherein control of the component involves suppressing deployment of the component based on the measured morphological characteristic(s) of the occupant and the current position of the seat.

Thus, in these embodiments of the invention, the component is controlled based on the morphology of the occupant and the seat position. For certain combinations of morphological characteristics and seat position, it is desirable to suppress deployment of the component, e.g., suppress deployment of an airbag. For example, if the morphology is the weight of the occupant, it is likely to be desirable to suppress deployment of an airbag when the weight is small and the seat is close to the airbag. The conditions for suppressing deployment of the component relative to the morphological characteristic(s) and the seat position can be determined prior to installation of the system in a vehicle to thereby provide optimized actuation or deployment of the component.

Bauer describes an apparatus which controls the position of an occupant and includes a controller 36 which controls seat motors 92, 94, 96 to move an occupant to a position based on sensed physical characteristics of the occupant. The position of the occupant is also used to select setting values for a restraint system, including values for aiming an airbag system and regulating a vent valve 50 (see col. 6, lines 43-51).

In contrast to the embodiment of the invention set forth in claims 1 and 15, Bauer does not disclose, teach or suggest suppressing deployment of a component based on morphology of the occupant and seat position. Rather, Bauer only describes determining an angle at which the air bag system should be aimed and a degree to which the vent valve should be opened. Thus, Bauer presumes that the airbag will always be deployed (and that only the manner in which it will be deployed is determined based on the sensed physical characteristics) and does not even contemplate the possibility of suppressing deployment of the airbag for specific combinations of morphological characteristics of an occupant and the position of a seat occupied by the occupant.

Thus, Bauer does not disclose all of the features of claims 1 and 15 and cannot anticipate the embodiments of the inventions set forth in these claims or in claims 2, 3, 5-14 and 16-24 which depend therefrom.

With respect to claim 26, claim 26 is directed to an arrangement for controlling deployment of a component in a vehicle in which one or more morphological characteristic(s) of an occupant are measured, a new seat position is determined based thereon and the seat is adjusted to the new seat position. Control means control deployment of the component based on the measured morphological characteristic(s) of the occupant and the new seat position. Among other things, the control means are arranged to suppress deployment of the component based on the measured morphological characteristic(s) of the occupant and the new seat position to which the seat is adjusted.

In contrast to the embodiment of the invention set forth in claim 26, Bauer does not disclose, teach or suggest suppressing deployment of a component based on morphology of the occupant and a

new seat position to which the seat is adjusted. Rather, Bauer only describes determining an angle at which the air bag system should be aimed and a degree to which the vent valve should be opened. The possibility of suppressing deployment of the airbag for specific combinations of morphological characteristics of an occupant and adjusted seat positions is not contemplated by Bauer.

Thus, Bauer does not disclose all of the features of claim 26 and cannot anticipate the embodiment of the invention set forth in this claim or in claims 27-36 which depend therefrom.

With respect to claim 37, claim 37 is directed to an arrangement for a vehicle including memory means for retaining an occupant pre-defined seat locations, memory actuation means for causing a processor to direct one or more motors to move the seat to the occupant pre-defined seat location retained in the memory means, measuring means for measuring at least one morphological characteristic of the occupant, automatic adjustment means for positioning the seat based on the morphological characteristic(s) measured by the measuring means and manual adjustment means manually operable for permitting manual movement of the seat. Also, the arrangement includes an actuatable occupant protection device for protecting the occupant. The processor controls actuation of the occupant protection device based on the position of the seat and can, if determined to be beneficial, suppress actuation of the occupant protection device when the position of the seat indicates that the occupant is out-of-position for the actuation of the occupant protection device.

In contrast to the embodiment of the invention set forth in claim 37, Bauer does not disclose, teach or suggest suppressing deployment of an occupant protection device when the position of the seat is indicative of an out-of-position occupant, i.e., the occupant is more likely to be harmed by the deploying airbag than benefit therefrom. The possibility of suppressing deployment of an occupant protection device based on seat position is not contemplated by Bauer.

Thus, Bauer does not disclose all of the features of claim 37 and cannot anticipate the embodiment of the invention set forth in this claim or in claims 38-43 which depend therefrom.

With respect to claim 44, claim 44 is directed to a seat adjustment system including a seat having a headrest and which is moved to an optimum adjusted seat position based on one or more morphological characteristics of the occupant. Measurement means are provided to measure the morphological characteristic(s) of the occupant and include a first measurement system attached to or incorporated within the headrest for measuring height of the occupant from an upper surface of a bottom portion of the seat such that the height of the occupant is one of the morphological characteristics.

Bauer does not disclose a height sensor attached to or incorporated into the headrest of a seat for measuring the height of an occupant. Rather, in Bauer, a height sensor 56 is mounted in the interior of the roof apart from the seat (see Fig. 1). Placement of the height sensor in the roof leads to possible errors in

the measure of the height of the occupant since the occupant may not be directly underneath the sensor 56 as shown in Fig. 1. By contrast, in the claimed embodiment of the invention, since the height sensor is arranged in the headrest, a more accurate height measurement is obtained in the manner describe din the specification.

Thus, Bauer does not disclose all of the features of claim 44 and cannot anticipate the embodiment of the invention set forth in this claim or in claims 45-53 which depend therefrom.

Bauer also does not disclose features of all of the rejected dependent claims. For example, with respect to claims 7 and 33, Bauer does not disclose a height sensor arranged in the seat to measure a height of the occupant. Rather, in Bauer, the height sensor 56 is mounted in the interior of the roof apart from the seat. This leads to possible errors in the measure of the height of the occupant since the occupant may not be directly underneath the sensor 56. By contrast, in the embodiment of claim 7, since the height sensor is arranged in the seat, a more accurate height measurement is obtained. In addition, with respect to claim 42, Bauer does not disclose an airbag including an exit orifice or valve having a variable size to enable the variable deflation thereof.

In view of the changes to claims 1, 15, 26, 37 and 44 and the arguments presented above, it is respectfully submitted that the Examiner's rejection of claims 1-3, 5-24, 26-37, 39-44, 46, 47 and 49-53 under 35 U.S.C. §102(b) as being anticipated by Bauer has been overcome and should be removed.

Claim Rejections-35 U.S.C. §103

Claims 4, 25 and 54 were rejected under 35 U.S.C. §103(a) as being unpatentable over Bauer in view of Mizuta et al. (U.S. Pat. No. 4,698,571). Claims 4 and 25 have been cancelled so this rejection is applicable only to claim 54.

Mizuta et al. does not disclose any mechanism for changing the damping of a seat in response to a measured morphological characteristic as set forth in claim 54. Also, Mizuta et al. does not disclose a first measurement system attached to or incorporated within a headrest for measuring height of the occupant as set forth in claim 44 from which claim 54 depends.

In view of the absence of all of the features of claim 54 in Bauer and Mizuta et al., one could not combine these references and arrive at the embodiment of the invention set forth in claim 54.

In view of the foregoing, it is respectfully submitted that the Examiner's rejection of claim 54 under 35 U.S.C. §103(a) as being unpatentable over Bauer in view of Mizuta et al. has been overcome and should be removed.

New Claims

Claims 55-58 are added of which claims 55 and 56 set forth features of the arrangement of claim 44. Claims 57 and 58 are directed to embodiments of the arrangement and method of claims 1 and 15,

respectively, wherein a plurality of morphological characteristics are measured and the deployment of the component is suppressed based on the plurality of measured morphological characteristics and the position of the seat.

No fee is due for the presentation of claims 55-58 in view of the cancellation of claims 4, 25, 38, 45 and 48.

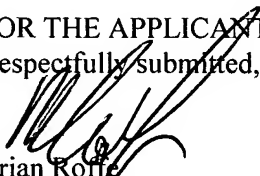
If the Examiner should determine that minor changes to the claims to obviate informalities are necessary to place the application in condition for allowance, the Examiner is respectfully requested to contact the undersigned to discuss the same.

Petition for Extension

A petition for a two-month extension to extend the time for reply to the Office Action from February 14, 2004 to April 14, 2004 is submitted herewith.

An early and favorable action on the merits upon entry and consideration of this amendment is earnestly solicited.

FOR THE APPLICANT
Respectfully submitted,



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Encl.

Petition for two-month extension